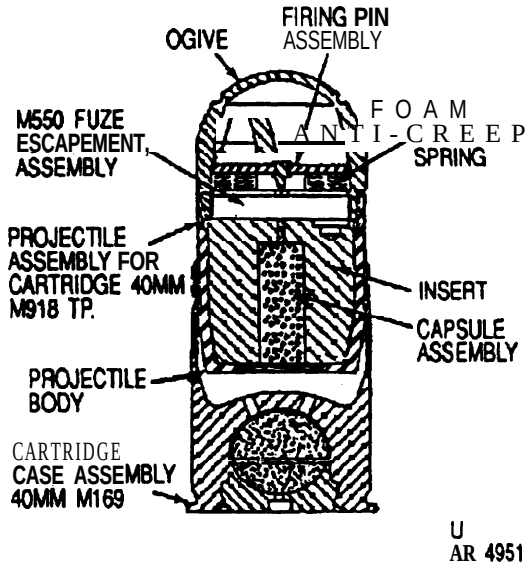
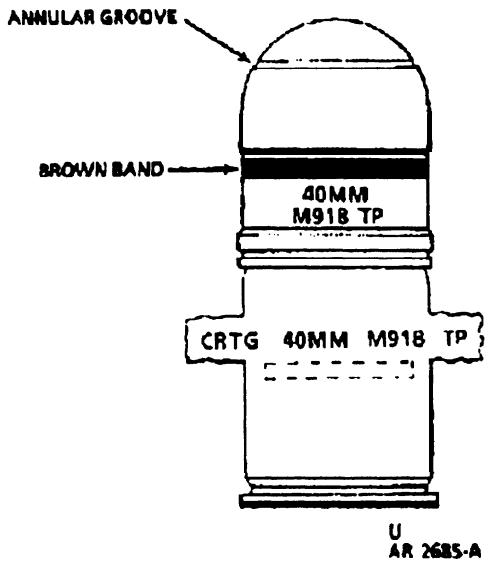
CARTRIDGE, 40-MILLIMETER PRACTICE, M918





Type Classification:

Std LCC-A MSR 01866003

Use:

This cartridge is a target practice round designed to simulate the M430 Cartridge in appearance and ballistics. It is fired from the 40mm Grenade **Machine** Gun MK19 Mod 3. It is also used in the cartridge, subcaliber ammunition, training (CSAT): M970 to simulate the loading and firing of large caliber ammunition.

Description:

This cartridge is a fixed round of ammunition consisting of a one-piece steel projectile body which is fitted to a cartridge case assembly An aluminum ogive, which contains a firing pin plate assembly, a cellular foam anti-creep spring, and the standard M550 fuze escapement assembly is threaded to the projectile body An aluminum insert which contains a flash charge chamber is enclosed in the projectile body A plastic container contains the flash charge chamber which contains one gram of flash charge composition. The projectile assembly is press-fitted into a cartridge case. The case is a hollow bichambered aluminum cylinder with a metal closing plug crimped into the open **well** of the propellant chamber cartridge base. The propellant in the chamber, which contains the propelling charge, has vent holes in the top and is sealed at the bottom by a closing plug. A percussion primer is crimped into the center opening in the closing plug. The propellant chamber acts as high pressure chamber, and the upper hollow cavity in the case acts as a low-pressure chamber.

Functioning:

The weapon firing pin strikes the percussion primer igniting the propelling charge. Pressure, generated by the burning propellant in the high-pressure chamber, forces **the expanding gases** through the vent holes into the **low-pressure** chamber and propels the projectile forward. The rotating band around the projectile engages the rifling in the launcher tube imparting a spin of 12,000 rpm to the projectile. The expanding gases in the low-pressure chamber force the projectile through the barrel with a velocity of 242 meters per second. When the projectile is fired, setback force causes the fuze setback pin to move rearward from the fuze rotor. The rotor is held out of line with the fuze detonator by the setback pin and fuze centrifugal lock which engages the gear teeth of **the fuze** rotor. **When** the projectile attains sufficient spin, the centrifugal lock releases the rotor and arming begins. The rotor begins rotation toward the center of the projectile. The rotor gear engaged with the pinion shaft delays **arming** of the **fuze.** After the projectile has traveled 18 to 30 meters from **the launcher tube, the** rotor is locked in **the armed** position and the fuze is armed. Upon impact with the target, the entire escapement moves forward compressing the cellular foam spring and driving the detonator into the firing pin, which in turn flashes through the small hole of the **insert** and ignites the flash powder, Gases generated by the burning powder are concentrated upon the base of the-projectile body causing it to rupture and producing a flash, smoke and a loud report.

Rupture begins at the very center of the projectile base forming hinged petals.

Tabulated Data:

NSN 1310-01-218-7070 - U.S. Army Pack
NSN 1310-01-218-7069 - U.S. Marine Corps Pack
NSN 1310-01-283-8652 - M970 Pack
NSN 1310-01-317-5948 - PA-120 Pack

Complete round:

Type	Target practice
Weight	0.76 lb
Length	4.415 in,
Weapons used with	MK19, Mod 3, 40mm grenade machine gun, M970 CSAT

Projectile:

Body material	Blank and
Color	draw steel Blue w/black markings brown band and blue ogive
Filler and weight	Flash charge composition, 1 g
Fuse	M550 escapement

Propelling charge:

Cartridge case	M169
Propellant	M2, 4.2 g
Primer	Percussion, FED 215

Performance:

Maximum range	2,200 m
Muzzle velocity	244 mps (795 fps)
Arming distance	18 to 30 m (59 - 98 ft)

Temperature Limits:

Firing:

Lower limit	-25°F (-31.7°C)
Upper limit	+110°F (+43.3°C)

Storage:

Lower limit	-30°F
Upper limit	+145°C (+62.8°C)

U.S. Army Pack:

*Packing	50 rounds in linked belt
*Packing Box:	
Weight	53 lb
Dimensions	26-3/8 x 16-1/4 x 6-3/16 in.
Cube	1.5 cu ft
Packing drawing number	9251995
Packing, PA-120	32 rounds in linked belt
Packing Box:	
Weight	42 lb .
Dimensions	18.76 x 10.39 x 6.36 in.
Cube	0.72 cu ft
Packing drawing number	12928042
PA-120 metal container	12564414

U.S. Marine Corps Pack:

*Packing	40 rounds in linked belt
"Packing Box:	
Weight	59.5 lb
Dimensions	18-19/32 x 14-19/32 x 8-19/64 in.
Cube	1.3 cu ft
Packing drawing number	9362543

*NOTE: See DOD Consolidated Ammunition Catalog for complete packing data including NSN's.

Shipping and Storage Data:

Hazard class/division and storage compatibility group	(04) 1.4 C
UNO serial number	0338
DOT class	Class C Explosive
DOT marking	CARTRIDGE, PRACTICE AMMUNITION
DODAC	1310-B584
Cartridge drawing number	9399372

References:

SB 700-20
DOD Consolidated Ammunition Catalog
TM 9-1010-230-10
TM 9-1010-230-23&P
TM 9-1300-251-20
TM 9-1300-251-34